Chapter 8
Water and Land Use

A principal intent of the IRWM process is to ensure the IRWM Plan incorporates and is consistent with local water and land use plans. This regional overview and integration does not supersede local planning, but is intended to encourage opportunities both to implement local goals and policies, and to provide better coordination between and among local planners. One of the California Water Plan Update 2009 goals is to ensure water managers and land use planners make informed, collaborative water management decisions to better assure meeting California's water needs into the future, especially in the face of climate change. Early coordination of water and land use planning decisions is recognized as one of the best methods for meeting that future need; to that end, this chapter highlights opportunities for improved coordination.

As the CABY region has grown, competing uses for water have intensified; human needs and environmental demand have required a concerted and sometimes complex balancing act. A representative from each local jurisdiction already serves both as a CABY member and a voting member on the CABY Planning Committee (PC). Each PC agenda includes an update section during which local representatives can inform CABY members of upcoming plan amendments, revisions, or preparation. In fact, interviews conducted during this Plan update revealed that many CABY region organizations already have exceptional coordination among and between planning entities. Many of these practices could be shared with other organizations because they represent successful 'lessons learned' and could easily be adapted to other processes. In this way, CABY may be a model for other IRWM regions when it comes to early coordination.

The CABY IRWMP is based on input from city and county land use planners, water agencies, non-governmental organizations, and land management agencies. This input and information from local plans has been synthesized into this chapter. A review of goals, objectives, and policies of the relevant plans confirmed that the IRWM Plan reflects, complements, augments, or is consistent with all of the relevant plans (see Appendix E - Land Use Table).

As described below, CABY initiated improved integration and coordination by conducting interviews with four water agencies and five land use agencies. These interviews highlighted the need for continued integration between water and land use agencies, especially for interties and sewage infrastructure development. It is the intention of the CABY PC to build on the momentum achieved during this early coordination phase.

8.1 Local Planning Relationship to the IRWMP

The IRWMP initially recognized and incorporated local water and land use goals and objectives into this Plan, as described above. The water, land use, and IRWM Plans seek to address water supply conflicts between users, water efficiency and water supply reliability, and riparian and in-stream environmental needs. (For reference, a matrix of the goals and objectives of the IRWMP and the water and land use plans is included at the conclusion of Chapter 9, Issues and Objectives.)

Projects developed under this IRWMP can then strengthen and manifest those local intentions through implementation and are designed to achieve success on the ground. For example, the CABY-sponsored water supply reliability project for disadvantaged communities of Locksley and Mount Vernon is designed to improve water use efficiency which is consistent with the goals and objectives of Nevada Irrigation District and Placer County Water Agency's Urban Water Management Plans. Similarly, the Tier 2, Outingdale/South County Waterline Extension within the Cosumnes River watershed is designed in compliance with the El Dorado County Water Resource Development and Management Plan and the General Plan.

Further, mechanisms to build on early momentum from the IRWMP water and land use coordination process offer promise, such as incorporating planning updates into the IRWMP, resolving inconsistencies, and scheduling interactions between and among agencies.

8.1.1 Incorporation of Future Water and Land Use Plan Updates into the IRWMP and Resolving Inconsistencies

Due to the variability of update requirements among plans, as well as the limited capacity of some jurisdictions to fund the required plans, it is not possible to schedule the future updates by year. Therefore, CABY has adopted an alternative strategy for ensuring that a nexus is created between updates and the IRWM process. Each PC agenda includes an update section during which local representatives can inform CABY members of upcoming plan amendments, revisions, or preparation. In this way, individual CABY members are informed of the opportunity to participate in the various planning processes and the CABY organization is notified of any plan updates or revisions. Various work groups are available to evaluate new or updated plans to determine their consistency with the CABY IRWMP. Because CABY is not an advocacy organization, it has not been deemed appropriate for an official CABY representative to provide input to local planning processes; however, CABY members often personally participate in these plan updates and thereby cross-pollinate.

The Project Team and Land Use and Water Planning Technical Advisory Committee have determined that collaboration could be especially helpful to address the following planning issues:

- flood management planning (this would likely involve participants from the Central Valley);
- groundwater recharge and banking opportunities (via interregional coordination);
- water treatment and conveyance facilities;
- stormwater and runoff management;
- targeted watershed management and restoration, and the identification of open space protection;
- municipal landscaping programs and associated water use efficiency efforts;
- recreational needs, including public access areas;
- long-term planning exercises;

- planning and development review;
- protection and enhancement of working landscapes;
- water quality protection and pollution prevention
- water management and use; and
- public safety and emergency planning.

The participation of CABY members in planning processes ensures that any inconsistency would be identified early in the respective process, and would enable the PC to develop an appropriate response within the IRWM process based on the collective input of PC members.

8.2 Water Planning

Most water planning documents are prepared based on mandatory guidelines and regulations. The overall content and topics addressed are generally similar across the region because surface water derived from snowmelt and/or wet-season precipitation serves the majority of both consumptive and environmental needs. The CABY water-delivery system has been built over 150 years and consists largely of upper-elevation storage reservoirs and extensive interwatershed infrastructure. The water plans all address some component of water storage, distribution, and land use designations based on environmental and planning principles.

Climate change has the potential to render existing raw water storage and conveyance facilities inadequate for a changing hydrologic regime. All CABY water agencies, large and small, are well aware of the potential consequences of increasing climate variability on their ability to store, treat, deliver, and export water.

8.2.1 Groundwater Management

No groundwater management agencies serve the CABY region and, as such, there are no groundwater management plans, projections, or guidelines. Groundwater resources in the region exist to a limited degree in the fractured bedrock of the region. Much of the interaction between surface and groundwater resources is unknown, though nearly all of the homes not served by a water purveyor are on individual water wells in fractured rock, presenting a possible vulnerability in the face of climate change. This is noted throughout this document as an issue for the CABY region.

8.2.2 Urban Water Management

The four largest water agencies in the CABY region – Nevada Irrigation District (NID), Placer County Water Agency (PCWA), Georgetown Divide Public Utilities District (GDPUD) and El Dorado Irrigation District (EID) – are subject to State requirements for urban water planning as set forth in the Urban Water Management Plan Act. State-mandated Urban Water Management Plans (UWMPs) are normally completed at five-year intervals as part of a master planning process. To date, all four CABY region water agencies have submitted 2010 UWMPs (published in 2011) with updated water supply information, reviewed as part of this IRWMP Update. A key provision in SB 610 requires that any project subject to the California Environmental Quality Act (CEQA) and supplied with water from a public water system be provided a water supply assessment, except as specified in the law. Previously the water supply assessments and UWMPs have not been formally presented to the PC meeting or posted on the CABY web portal; however, the PC has determined that future assessment and plans will be presented to the PC and posted on the portal upon completion.

A number of other water purveyors with smaller service areas in the region are not subject to the UWMP Act. They include: City of Placerville, City of Auburn, City of Colfax, City of Nevada City, Washington County Water District, and the Grizzly Flats Community Services District. There are also smaller, community-based water systems of between five and thirty connections; these are largely vacation-home communities, also not subject to the UWMP Act.

8.2.3 Agricultural Water Management

California Water Code Section §10820 (a) requires all agricultural water suppliers that provide water to 10,000 or more irrigated acres to prepare Agricultural Water Management Plans (AWMPs), to measure water delivered to customers, adopt pricing based on quantity delivered, and implement water efficiency practices. NID has prepared an AWMP that includes information about the agricultural water supplier and service area, inventory of water supplies, water balance, climate change, and efficient water management practices. NID serves about 5,400 agricultural customers with an average total reported irrigated acreage of 29,400 acres. Water uses within the District's service area are domestic, agricultural, environmental, municipal, and recreational.

8.2.4 Water Planning Element Within General Plans

Each city and county in California must prepare a comprehensive, long-term general plan to guide its future with updates every 10 years. To assist local governments in meeting these requirements, the Governor's Office of Planning and Research prepares guidelines for the preparation and content of local plans (General Plan Guidelines 2013) and these guidelines mandate a Land Use Element but they include an Optional Water Planning Element.

All nine counties and many of the cities in the CABY region have updated General Plans. The plans address multiple aspects of water, from supply and water quality maintenance to protection of environmental water needs and conservation. Some plans are more specific about water management; for instance, the City of Colfax included a Water Resources section and Grass Valley included a Hydrologic Features section. Appendix E - Land Use Table, provides more detailed descriptions of the CABY county General Plans.

The CABY IRWM Plan integrates with the mandates, standards, and goals of city and county planning in two primary ways:

1. through direct communication with city and county planners regarding IRWM goals, objectives, and implementation ideas; and
2. through the participation of local planners in the IRWM planning process and in project-specific design.

By way of example, the CABY IRWMP Water Supply and Water Quality goals/objectives were developed to complement the county General Plan water elements and the goals of the Urban Water Management Plans compiled in the region. For example, CABY-sponsored projects such as "Improving Water Efficiency and Water Quality: Canal Lining; Gauging Stations/Water Efficiency Education" in the American, Bear, and Yuba watersheds; the "Grass Valley Drainage System Repairs: Flood Protection Improvement" in the Bear watershed; and the Tier 2 Project "Outingdale/South County Waterline Extension" (see Chapter 12, Project Review Process, Table 12-2) are designed to maximize water-use efficiency and provide reliable sources of drinking water to residents in the region. These projects are not only fully compatible with but also help facilitate the water planning efforts described in the water

elements of the corresponding General Plans, UWMPs, and land management plans listed in Appendix E - Land Use Table.

8.2.5 Flood Management

Flooding is not a widespread issue in the CABY region; however it is of localized importance, such as flooding within the City of Placerville. Placerville experiences serious flooding in the downtown commercial area almost annually as a result of overflow from nearby Hangtown Creek. Flooding from Hangtown Creek regularly disrupts traffic and interferes with economic development and can impact residential areas as well. The City of Placerville Stormwater Management Plan is designed to help restore this drainage and improve the small waterway to avoid flooding. The CABY IRWMP seeks to help facilitate the Stormwater Management Plan implementation through the CABY-sponsored project "City of Placerville Water Quality and Habitat Protection: Hangtown Creek Sewer line Replacement." (See Chapter 12, Table 12-2.)

Moreover, land use and water infrastructure in the CABY region directly and indirectly supports flood-control infrastructure in the Central Valley by attenuating flood flows as local upstream water supply/hydro reservoirs are filling in the winter/spring runoff period. For example, upstream reservoir levels in the American River Basin (Hell Hole, French Meadows, and Union Valley Reservoirs) are integrated into the flood control rule curves used by the U.S. Bureau of Reclamation (USBR) and the Army Corps of Engineers for flood operations at Folsom Reservoir. These three upstream storage reservoirs, together with numerous other water supply/hydro reservoirs in the CABY region, not only help prevent flooding in the Central Valley and reduce pressure on the downstream levee system in the valley, they also provide regulated water supply for later downstream municipal/industrial and irrigation uses including within the Central Valley Project (CVP) and State Water Project (SWP). In short, CABY region reservoirs and water infrastructure provide California residents with hydroelectric energy, water supply, and the downstream benefit of flood control. A number of CABY-sponsored projects listed in Chapter 12, Project Review Process, such as the Yuba River Regional Water System Infrastructure Improvement Project and the Combie Reservoir Sediment and Mercury Removal Project, are designed to maintain and improve the reliability of the reservoirs and infrastructure for the protection and benefit of residents far beyond the CABY region boundaries. Many of the CABY water agencies are participating in the USBR Sacramento-San Joaquin River Basin Studies, an analysis of climate change adaptation measures and evaluation of storage needs and several new and expanded storage sites in the CABY region.

The CABY region also harbors numerous meadows in the upper reaches of the watersheds which provide flood attenuation and water storage. Montane meadows are important in the context of land use because they can cool and filter water as well as reduce peak flood flows, making downstream water more reliable, much as man-made reservoirs do. Meadows store water which offsets downstream flood events and extends water storage into dry summer months. The CABY project known as "Meadow Enhancement and Restoration in the Yuba, Bear, and American River Watersheds" (see Chapter 12, Project Review Process), is designed to enhance and restore meadow habitats, thereby improving flood management for the benefit of downstream users with the added benefit of enhancing crucial wildlife habitat.

8.2.6 Watershed Management

For planning purposes, the CABY region can be divided into two geographic areas: the upper watersheds and mid-to-lower-elevations. The upper watersheds, from about 3,000 feet and above, are almost

uniformly held in public ownership and managed by the Forest Service. The upper elevations are generally source watersheds with relatively little development pressure. However, the checkerboard private and public land ownership patterns present significant challenges for comprehensive land and watershed management. Representatives from both the Eldorado and Tahoe National Forests are active participants with CABY and many of the CABY non-profits are focused on National Forest System lands so there is a high degree of collaboration about resource management and improvement in these reaches of the watersheds. Forest Service planning documents provide guidelines and management direction for the upper watersheds. These plans are listed in Appendix E - Land Use Table.

By contrast, the mid-to-lower elevations are largely in private ownership and experience the greatest development pressure, competing interests and the volatility of local politics. As described in Appendix E - Land Use Table, a number of river management plans, fire plans, and watershed and conservation plans have been developed within the lower elevations of the CABY region.

In addition, a variety of non-profit organizations across the CABY region focus some or all of their programmatic efforts on a variety of watershed assessment documents, studies, and reports. Some key management plans and studies published by these organizations are:

a) the South Yuba River Citizens League authored a critical planning document entitled *The 21st Century Assessment of the Yuba River Watershed* published in June 2010;
b) the Sierra Streams Institute published the *Deer Creek Watershed Restoration Plan* in March 2011;
c) the Sierra Fund authored a critical document entitled *Mining's Toxic Legacy* in 2008;
d) the Upper American River Foundation was begun with a previous watershed coordinator grant (Proposition 50, through the California Department of Conservation) and is made up of a diverse group of members of the public as well as agency representatives;
e) the South Fork American River Watershed Group authored the *South Fork American River Watershed Plan* (also begun with a previous watershed coordinator grant), which is largely made up of agency representatives; and
f) the American River Conservancy authored an *Environmental Assessment and Strategic Plan for Conservation of the Cosumnes River* published in 2001.

These groups were in place as the CABY IRWMP was first being developed in 2006 and 2007, and the CABY PC identified them as an incubation area for project development and prioritization. In this way, CABY has fully integrated the watershed-level perspective into the planning process.

8.2.7 Multipurpose Program Planning

Multipurpose program planning is another form of watershed planning, and one that may take more activities into account than traditional watershed planning. These may include roads and transportation planning, emergency preparedness planning, and/or low-impact development and stormwater management. While this type of planning is not extensively included in this chapter, representatives from such a variety of management agencies, public interest groups, business interests, and governmental agencies which consider these more diverse forms of planning and management, are present through PC membership and participation, and bring points of interest forward when appropriate. These plans have also served as a basis for identifying issues and projects.

8.3 Land Use Planning

Land use planning is conducted within the region by nine counties, seven cities, a resource conservation district in conjunction with a watershed group, the two National Forests**,** Bureau of Land Management, and CalFire. Land use planning is inherently political and highly controversial within all counties of the CABY region, often drawing out and increasing the expense of the required 10-year General Plan update process.

Primary land use planning entities involved in this IRWMP have included:

- American River Watershed Group
- Bureau of Land Management
- CalFire
- City of Auburn
- City of Colfax
- City of Grass Valley
- City of Loomis
- City of Nevada City
- City of Placerville
- City of Plymouth
- El Dorado County
- El Dorado County Resource Conservation District/South Fork Nevada County
- Eldorado National Forest
- Nevada County
- Placer County
- Sierra County
- Tahoe National Forest

Land use planning is conducted by the counties on private unincorporated lands. Much of the public land is planned and administered by the National Forests, leaving cities and counties with responsibility for a large proportion of the planning, but with little jurisdiction in overall land area.

Population trends for the CABY region show that CABY's population is expected to grow at a rapid rate. California Department of Finance projects a population increase in the Mountain Counties, in which all CABY counties are located, of 85 percent between 2000 and 2050. This would be an increase of 373,732 people in the CABY region alone between 2000 and 2050. Most of this growth is anticipated in the lower elevation areas. With this growth will come increasing demand for water – providing further reasons to connect water and land use planning interests.

Water-related supply and treatment issues are included in the Conservation Element of general plans. Policies that must be addressed in the Conservation Element include the following:

- SB 221 prohibits approval of subdivisions consisting of more than 500 dwelling units unless there is verification of sufficient water supplies for the project from the applicable water supplier(s). This requirement also applies to increases of 10 percent or more of service connections for public water systems with less than 500 service connections.
- SB 610 and AB 901 make changes to the Urban Water Management Planning Act to require additional information in UWMPs if groundwater is identified as a source available

to the supplier. A key provision in SB 610 requires that any project subject to the CEQA and supplied with water from a public water system be provided a water supply assessment, except as specified in the law.

- State of California General Plan Guidelines (Governor's Office of Planning and Research [OPR] 2003) recommends facilitating SB 610 by having strong water elements in local general plans that incorporate coordination between the land use agency and the water supply agency.

Even with these policies in place, efforts to link land use and water management decisions remain challenging.

8.3.1 Climate Change Planning

The Sierra Nevada Climate Action Plan is one of three efforts being led by the Sierra Nevada Conservancy in responding to the direction of its board in the development of the Sierra Nevada Climate Change Initiative. The Sierra Nevada Conservancy Climate Action Plan of the Sierra Nevada (2009) addresses potential impacts to water, habitats, endangered species, fire, and recreation resources in the entire Sierra Nevada including the CABY region. This plan is discussed further in Appendix E - Land Use Table.

Most county planning processes do not include considerations of climate change (adaptability), but most do include consideration of greenhouse gas emissions (mitigation). This is a mandatory measure for consideration in general plans' Housing and Transportation Elements. For example, in El Dorado County in 2008, the El Dorado County Board of Supervisors adopted the "Environmental Vision for El Dorado County" Resolution No. 29-2008, brought forward by the Youth Commission. The resolution sets forth goals and calls for implementation of positive environmental changes to reduce global impact, improve air quality, reduce dependence on landfills, promote alternative energies, increase recycling, and encourage local governments to adopt green and sustainable practices.

8.3.2 Water Management and Land Use Planning Communication

In spring of 2012, CABY completed a series of interviews with five land use planning entities and four water management agencies identified in Table 8-1, Agencies Participating in the Water-Land Use Interviews Completed In Spring 2012. These interviews were conducted to assess the level of coordination and communication between water and land use agencies in the region. CABY's Water and Land Use Technical Advisory Committee (TAC) aided in the identification of interview questions and candidates. The TAC's original focus was centered on improving communication, accounting, and coordination. However, the interviews revealed that many CABY region organizations already have exceptional coordination and accounting practices, either within a single agency, or between water and land use entities. In fact, many of these practices could be shared with other organizations because they represent successful 'lessons learned' and could be easily adapted to other processes. The following paragraphs discuss general trends found in the interviews, highlighted successes, and areas where communication and coordination between entities may be improved. One interview focused on 'visioning' for water and land use coordination and is summarized at the end of this chapter.

Table 8-1 Agencies Participating in the Water-Land Use Interviews Completed In Spring 2012	
Water Agencies	El Dorado Irrigation District
	El Dorado County Water Agency
	Nevada Irrigation District
	Yuba County Water Agency
Land Use Agencies	El Dorado County
	Nevada County
	Yuba County
	Sierra County
	City of Placerville (planning and water supply staff)

8.3.2.1 Interview Findings

In general, the CABY region has relatively well developed coordination and communication between planning entities, due partly to the forum CABY provides. Needed improvements are identified below. Of note is that water is *not* currently the driving force of regional land use planning. Commute distances and the time and costs associated with that travel have a much greater influence on land use planning at present.

Coordination and Communication

Urban water management agencies represent the largest contingent of CABY water management interests. Outside of the CABY PC, NID and PCWA have the most frequent communication in the north CABY region, due largely to proximity and infrastructure sharing. On the south end of the region, EID and EDCWA communicate about water supply and water rights issues, as well as participating in county-level planning meetings. CABY serves as a hub of information between water agencies and local jurisdictions, as well as a place for non-profit organizations and community members to contact their water provider.

The land use planning entities in the CABY region convey information to water management agencies as part of the General Plan update processes. Likewise, water agencies in the CABY region share their Urban Water Management Plans with land use planning entities when they are updated. Each water agency also receives CEQA statutory notification of land use issues, such as General Plan amendments and subdivisions. However, a higher level of communication is lacking, focused on long-term planning. During the interviews, several needs for sustaining or improving coordination were noted:

- Some entities within the CABY region are just beginning to engage in coordination and others have neglected to practice consistent communication. Both of these group types, in particular, need a consistent forum and may need additional outreach from CABY.
- The turnover in staff was noted as a key reason for continued coordination. Because there is not usually a policy or protocol guiding communication, it is important to know who to call at the counterpart agency for the variety of issues that may arise. This coordination usually occurs between staff at similar planning levels: technical staff contacts technical staff, management contacts management.

- It does not seem to be common for elected boards to contact each other, though it was noted in one interview that having a common elected board made coordination much easier.
- One set of interviewees pointed out that in their jurisdiction, it was likely the relationships that made the communication work.
- One entity noted that the biggest challenges in communication come up during long-term developments. Development projects often take up to a decade, and so periodic communication between the developer, the water agency, and the land use entity over time is paramount.
- The point was made that some counties in the CABY region are small enough for every planning and environmental health department employee to know what is going on with groundwater, development pressures, and water availability. However, no maps currently indicate this information and, while maps would be helpful, the planning departments must ensure that the creation of those maps does not affect land values or desirability of specific communities.

Small and Rural Water Systems

Common among all interviewees is the challenge of serving remote communities and homes. Remote communities with independent water systems or individual wells are vulnerable to loss of supply or aging infrastructure. In many cases water resources are not adequate to serve these areas, and in many cases the soil is not adequate to support septic systems. Several interviewees acknowledged that these small, rural, remote developments would not occur now because of improved communication between environmental, water, and land use agencies.

When a small system becomes inoperable, pressure is often exerted on a public water supplier to provide service to these areas. This is a challenge on many levels:

1. Cost is the biggest challenge; individuals on small systems often are not able to pay for the very high cost of running water supply infrastructure to remote areas. The water agency bearing that cost must then subsidize the small community.
2. Engineering can also be a challenge: remote areas often remain so because of the difficulty in delivering services across ridges and through valleys.
3. Development pressure may result from water provision in areas not designated as residential in the region's various general glans.

Water-driven versus Planning-driven Development

In most cases, planned water agency expansion provides backbone infrastructure for development consistent with General Plan land use designations. This infrastructure is paid for through connection fees collected from developers. For the most part, water agencies plan infrastructure expansion consistent with their respective General Plans. However, there are infrequent instances where large-scale land use amendments can mismatch infrastructure capacity and water requirements. In these cases, the burden of increasing capacity or supply is generally borne by the developer. In some cases, these 'surprises' can incur cost to the water purveyor, and additional communication throughout the life of a development project, as mentioned above, would be helpful. In some cases, developers drive the installation of backbone infrastructure, where the project size can support the improvements or where water supply limitations require creative solutions. This was the case with the Serrano Development funding water recycling infrastructure in Cameron Park and El Dorado Hills.

Likewise with General Plan changes, while water agencies often make comments on changes that affect public water service, it was stated that sometimes these comments are too late to have an effect and can result in inefficient water infrastructure.

Water Supply Availability

In one interview it was stated that the county would not accept a cap on water supply (thereby capping development). The interviewee stated that the county would simply increase that cap and tell the water agency to find the water. In this same interview, the agency stated that it is responsible to find as much water supply as is needed for continued development as projected by the county and cities within the agency's service area.

It was quite evident throughout the interview process that counties having a history of water challenges generally have better water-land use communication protocols than those that historically have not experienced water supply limitations.

Agricultural versus Urban Needs

Several planning units within the CABY region include high levels of agriculture land use. An inherent fear in the agricultural community, especially when agricultural users receive potable water, is that they will be marginalized, or that their supply will be pirated because of a developer's willingness to pay a higher price. Some water agencies plan for agricultural use consistent with General Plan designations while others estimate use based on metered use.

Emergency Planning

Emergency responses to disasters often involve water resource planners both in planning for emergencies and responding to emergencies. The types of emergency situations that can occur in the CABY region include damage to water-related infrastructure by fire or flood, damage to critical infrastructure as a result of operational failures, and/or emergencies that result from weather such as extended droughts or wind/snow storms in the upper elevations.

The CABY region stakeholders have demonstrated strong coordination skills as needed during emergencies and several stakeholder entities participate in multi-jurisdictional hazard mitigation planning efforts as well. Seven of the nine counties in the CABY region have adopted a Hazard Mitigation Plans in accordance with the Disaster Mitigation Act of 2000; the two remaining county plans are in the draft or update stage.

8.3.2.2 Successes Identified through the Interview Process

In El Dorado County, historically plagued by supply limitations coupled with development pressures, water-land use coordination has been refined substantially over the last two decades. The coordination process evolved as demand approached existing water supplies. This resulted in the land use agency requiring 'proof' of water availability before it would accept an application for, or consider a land use decision. In the mid-90s, the El Dorado County Board of Supervisors (BOS) passed an ordinance requiring proof of meter purchase before the final approval of subdivision maps. Because meters have to be purchased, the associated water use is tracked and set aside, and is not available for sale to others. The BOS resolution requires that an annual water supply-and-demand accounting be provided to the county that informs staff and land use decision makers and makes the information public. Tracking is also done at the application stage by EID. EDCWA also periodically prepares a countywide water master plan to

accompany the county's General Plan that identifies and makes recommendations regarding the longer-term water supply needs of the county, not only with purveyor service areas but countywide.

In Nevada County, all land use planning efforts are managed under the 'one roof' of a Community Development Agency (though the major water supplier in that county is not included in this agency). In that way, issues of well water safety, transportation planning, lot size and use zoning, and many other considerations may be dealt with as a team. This limits the 'silo' effect of having various departments review and approve. The planning team discusses each proposed project on at least two occasions: 1) a pre-application meeting including the developer/applicant, and 2) a staff meeting to discuss project findings. The designation of the planner as the 'project manager' for each project, and a review file and routing sheet that follows the project to each reviewer for a 'sign-off,' ensures integrated review. An even more successful strategy may be to include the water purveyor at a designated step in the process.

In Sierra County an ordinance was passed banning the sale of water outside the county. This was done largely because of a single project: developers purchased land on the county's eastern border with the State of Nevada, and were planning on sending the water over state lines. Yuba County has a similar ban on pumping groundwater for export out of county, though the export of surface water is allowed.

Follow-up Interviews

Follow-up interviews served as a mechanism to more fully integrate water and land use planning and they helped to identify activities that could enhance 'on-the-ground' collaboration between land use and water management entities. The interviews also identified recommendations and successes that could be replicated elsewhere in the region

Nevada County and NID: Staff members of the NID and Nevada County Planning and Environmental Health Department met on January 10, 2013, to discuss some of the topics noted above. Participants noted that even though there are State-mandated coordination efforts with which both entities must comply, these are often not adequate for implementation-level water planning and long-range (General Plan-level) planning. In addition to general coordination, the prospect of climate change indicates additional future challenges for which the water district and the planning agency would be better prepared if working together; the consensus was that the agencies could "combine resources to make a stronger regional position from an economic, quality of life, and many other standpoints."

Both entities agreed that coordination should continue, at least twice a year, if not quarterly. Staff time is always a challenge, but they both stated that the benefits from this collaboration would be fully worth the staff time required. Topics for future conversations include: coordinated planning for areas currently without infrastructure; a discussion of the 20x2020 legislation requiring the county to participate in landscape water conservation efforts; a discussion and identification of previous successes regarding groundwater availability and infrastructure extensions to development areas; better coordination on well-decommissioning when infrastructure is extended; and how to avoid miscommunication with the county's Environmental Health Department regarding the placement of wells and septic systems. Groundwater conversation is significant because of the frequency this challenge was mentioned in the initial interview process.

Both agencies committed to involving the other earlier in the high-level planning processes: NID will more fully include the county in its master planning process and the county will better inform and involve NID in its general planning process. There was mention of a 'development review committee,' as

is used in El Dorado County, to serve as a possible structure for the effort. This will be pursued in future meetings. Nevada County agreed to take responsibility for holding the next collaborative meeting. Both agencies are bringing on new staff in significant managerial positions, and will be better able to integrate these efforts with the additional staff. They agreed to report outcomes to CABY on a regular basis as meetings occur.

Placer County and PCWA: Staff members of PCWA and Placer County Planning and Environmental Health Department met by conference call on March 31, 2013, to discuss the integration of land use and water planning. Based on the interview, these two agencies appear to be working closely together and there are no major issues or concerns. PCWA currently has the capacity to serve water to maximum build-out of the General Plan, even during multiple dry years. Both agencies are closely involved with implementing the Placer County Conservation Plan (PCCP), an amendment to the General Plan that identifies those areas available for development within county. PCWA is responsible to ensure that they have the ability to serve surface water to areas targeted for development and for compliance with the Endangered Species Act. PCWA is a critical stakeholder in the development and implementation of the PCCP.

On a routine basis, when Placer County or municipalities within the county have a development project submitted to their planning departments, a notice is sent to PCWA requesting their comments. These notices are sent to PCWA almost daily. Typically, an Environmental Specialist at PCWA receives and reviews these notices and prepares a response.

Current Regulatory and Policy Developments: Placer County is developing several policies to address water development in coordination with PCWA. Staff is also considering developing a Countywide Water Master Plan that focuses on rural, underserved areas. Placer County includes over 100 small water systems distributed throughout the county and recently has been working with County Environmental Health to better understand these systems. The goal is to ensure all county residents have access to a reliable supply of safe drinking water.

8.4 Recommendation and Future Actions to Improve Coordination

- In building on the successful coordination efforts noted above, the CABY PC is currently evaluating ways to encourage more diverse communication between water and land use managers in the CABY region. Ideas include an annual water-land use summit; planning-themed PC meetings; and watershed-specific meetings between water and land use professionals on a more targeted basis. These concepts will become more developed with time, but the PC views the water-land use connection as a priority for the region.
- Growth in this largely rural region may occur outside the purview of SB 510; in other words, cumulative effects of smaller subdivisions that do not have to provide (i.e., can avoid) water supply assessments might have greater impacts than well-planned larger subdivisions. Land use planning entities may want to consider requiring demonstration of adequate supply and infrastructure for smaller projects. This effort could include consideration and quantification of cumulative effects of land use on water supply by working with El Dorado County's example.
- One county has maintained agricultural parcel size at 160 acres, minimum. This parcel designation has helped in preserving the groundwater availability in those parts of the county and has also served to guide development into the community cores. A CABY-facilitated conversation about the pros and cons of this approach for interested counties, and an

examination of the successful political strategy used, would extend and coordinate lessons learned.

- One of the interviews evolved into an informal vision session for the 'ideal' situation for communication/coordination between water managers and land use planners: In Placer County, land use planners, including middle-management and/or department heads from each entity, could meet with water managers as often as quarterly (depending on the pace of development). The discussion could include projected growth areas, large project tracking, infrastructure development and project review, both future and current planning efforts, and strategic issues for both entities. The meetings would be organized as needed by the affected parties, and occur with the intent of resolving regional planning issues. Note: NID and PCWA meet quarterly for a similar purpose on a water agency-to-water agency level. These meetings have proven to be invaluable to the two agencies as they identify and solve issues of mutual concern and import. If this model is successful, it is expected that, with CABY support, similar initiatives could occur in other counties in the CABY region.